PO BOX 1447, OAK BLUFFS, MASSACHUSETTS, 02557, 508-693-3453
FAX 508-693-7894 INFO@MVCOMMISSION.ORG WWW.MVCOMMISSION.ORG

Minutes of the Commission Meeting Held on March 28, 2019 In the Stone Building 33 New York Avenue, Oak Bluffs, MA

IN ATTENDANCE

Commissioners: (P= Present; A= Appointed; E= Elected)

- Gail Barmakian (A-Oak Bluffs)
P Trip Barnes (E-Tisbury)
P Leon Brathwaite (A-County)
P Christina Brown (E-Edgartown)
- Peter Connell (A-Governor; non-voting)
P Robert Doyle (E-Chilmark)
- Josh Goldstein (E-Tisbury)
P Fred Hancock (E-Oak Bluffs)
P James Joyce (A-Edgartown)
- Michael Kim (A-Governor; non-voting)
P Joan Malkin (A-Chilmark)
- Katherine Newman (A-Aquinnah)
P Ben Robinson (A-Tisbury)
P Doug Sederholm (E-West Tisbury)
P Linda Sibley (E-West Tisbury)
P Ernie Thomas (A-West Tisbury)
P Richard Toole (E-Oak Bluffs)
- James Vercruysse (E-Aquinnah)

Staff: Adam Turner (Executive Director), Bill Veno (Senior Planner), Sheri Caseau (Water Resources Planner), Dan Doyle (Regional Planner).

Chairman Doug Sederholm called the meeting to order at 7:00 p.m. Tonight is a planning meeting with a presentation by Brian Howes on the Massachusetts Estuaries Project.

1. REPORT OF THREE YEAR ISLAND WIDE WATER QUALITY MONITORING

Commissioners Present: T. Barnes, L. Brathwaite, C. Brown, R. Doyle, F. Hancock, J. Joyce, J. Malkin, B. Robinson, D. Sederholm, L. Sibley, E. Thomas, R. Toole.

1.1 Updates

Adam Turner presented the following.

- This is a report of the three year Island Wide Water Quality Monitoring Progam.
- The MVC has put a lot of time and effort in looking at the nitrogen situation on the Vineyard including housing and the economy and a goal to make the situation better.
- In the last three years we have made a difference.
- This is an overview of what we have done in the last three years.
  - In 2015 we made the determination to conduct extensive water quality testing for three years.
  - In 2016 we held a water quality forum in West Tisbury.
  - In 2017 there was the development of the New Water Quality Policy for DRIs and it was completed in 2018.
  - In 2018 there was partnering to determine if Nitroe and Santoe Systems performed as projected. There was also the development of the database for testing results from 1990 to the present. We received an EPA Award to develop a permeable reactive barrier in Lagoon Pond and this was our first real EPA award.

- In 2019 we received a DHCD Grant to develop a Wastewater Plan for Island Elderly Housing. The Short Term Rental Bill includes a potential funding tool for Island projects.
- Water quality testing is one of the biggest things that we do. It is a very extensive project and Sheri Caseau does a fantastic job.
- We are at a tipping point, we could do better or there are ponds that are in danger. There is a lot of work to be done.

1.2 Results Presentation

Brian Howes presented the following.

- He thanks the MVC for their hard work for the many years and for having him at the meeting.
- The most involved route parties now are three towns on the Cape and the Vineyard and the Vineyard is really pushing this.
- Water quality is monitored in the summer and it is not easy to do this work. There are thirteen estuaries to be handled with proper procedures to be accepted by DEP.
- We want to improve the bad conditions.
- There is a lot of confusion about the load of nitrogen that goes into the estuary. All ponds can handle some nitrogen and the problem is when it becomes too much. It is the concentration that sets the tone and you control the concentration by how much you put in and take out.
- Without a lot of flushing the ponds are sensitive to the loads.
- Why is it important to control nitrogen? It impacts pond health such as fish, clean water, birds, eelgrass and other vegetation.
- You can hit the nitrogen target but if you don't have the shellfish and the eelgrass back you don't have the ponds back.
- Since the day we started monitoring (in 1987 it started in Falmouth with a project for NOAA) one year is a trend and three years is a minimum amount of data to analyze.
- There are a lot of year to year differences and we have seen that in the three year data.
- He will cover some of the estuaries tonight but not all thirteen and the report is on the MVC website.
- Benthic animals are those animals that live in the bottom; little worms, clams and crustaceans that are fundamental to the whole estuary system and that is what we are trying to restore and affect.
- Habitat Degradation; increased nitrogen loading to estuaries resulting in wholesale decline in estuarine habitats from shifting land use. Many of the Martha's Vineyard estuaries are showing some level of nitrogen impairment (moderate to high).
- A map of the estuaries and salt ponds was reviewed.
- Goals of the Water Quality Monitoring Program:
    - To assess the current nutrient related water quality of each estuary within the Towns of Martha's Vineyard.
    - To track short and long term changes in embayment health.
    - To yield site specific validation of the effectiveness of nitrogen management alternatives.
    - Compliance monitoring to meet requirements of TMDLs as they are developed and as towns across the Island move into implementation of restoration approaches.
    - Provide a mechanism to easily compare present water quality data to MEP established nutrient thresholds.
- Estuarine Sampling for water quality testing you look at: ammonia, Nitrate/nitrite, dissolved organic nitrogen, particulate organic nitrogen, particulate organic carbon and nitrogen,

orthophosphate, chlorophyll-a and pheophytin-a and physical parameters such as clarity, temperature, depth, dissolved oxygen, salinity and observations.

- A lot of the Martha's Vineyard systems are at the tipping point where if the level gets worse they will be impaired and that is not true for other areas in the region such as Buzzards Bay. You have to look at the long term trends and the parameters. The Estuaries Health Index is very useful as it combines five metrics into the number.
- The 2018 sampling schedule was reviewed.
- Lake Tashmoo.
  - A map of the stations was reviewed.
  - Sentinel stations allow you to look at a site but you still need to look at the other stations within the site and the data was reviewed.
  - The highest quality waters are near the tidal inlet with a slight decline in quality towards the head water station.
  - The high water quality waters in Lake Tashmoo is supporting the infaunal habitat and eelgrass beds that remain in the system. Eelgrass is typically associated with the highest quality waters and estuarine habitat, but as coverage is declining and showing signs of stress it appears that nitrogen is just above its threshold level, particularly at the upper sentinel station.
  - 2018 was a low nitrogen year mostly due to the input/ground level.
  - It is close to being acceptable but it really isn't okay. It is right there where you could see improvement.
  - Summary; has modest nitrogen enrichment and some oxygen decline but generally good water clarity and low phytoplankton biomass. Just exceeds 2017, just below 2018 MEP TN Threshold (management required).
- Lagoon Pond.
  - It is the same things as Tashmoo Pond, traditional stations and sentinel stations.
  - The highest quality waters are near the tidal inlet.
  - How do you explain that one year is a little above and one year is a little below and then one year is okay.
  - The pond is on the edge.
  - Poor water quality was always found up in the cove.
  - The upper part of the pond is showing nitrogen overload.
  - Summary; supports moderately impaired water quality consistent with remaining eelgrass and infauna. Water quality impairment primarily due to modest nitrogen enrichment and periodic oxygen declines. Generally good water clarity and low phytoplankton biomass. MEP TN Threshold equal 2017 and below 2018.
- Oak Bluffs Harbor.
  - We have not done a complete analysis of Sunset Lake.
  - The system is not in bad shape because it has great water quality offshore. But you need to be sure you don't let it go up in concentration.
  - The main basin supports relatively high water quality while the enclosed tributary basin of Sunset Lake and possibly the western station (marina area) is showing some nutrient related impairment.
  - Sunset Lake is likely being impacted both by its local sub-watershed and its hydrodynamics but a specific analysis needs to confirm if altering tidal flows would be sufficient for its restoration.
  - The moderate impairment appearing in the main basis is likely related to its function as a harbor and its structure.

    - As of 2018, it is not clear if the 2016 to 2018 decrease is indicative of real change or if tidal flushing through the tidal channel between Sunset Lake and the Harbor occurred.
    - It has a moderately impaired water quality due in part from the depositional nature of the main basin.
    - Summary; the main basis supports relatively high and uniform water quality. Sunset Lake showing some nutrient related impairment and has moderate water quality which results from elevated nitrogen levels, reduced water clarity and periodic oxygen depletion. Just below 2017 and 2018 MEP TN Threshold.
- Farm Pond.
    - It is one of the happiest systems that we looked at in the MEP.
    - The eelgrass is there but at some point it will be stressed out.
    - Historically it has had some really big plumes.
    - There is a light nutrient gradient across the pond.
    - It is one of the few systems in the region if you replace the culverts the system will be okay and we have to push this.
    - Summary; water quality presently moderate being impaired by elevated nitrogen levels with associated periodic oxygen declines and reduced clarity. MEP Threshold just equal in 2018.
- Sengekontacket Pond.
    - It is a coastal lagoon formed behind a barrier beach with two engineered tidal inlets that are periodically dredged to maintain tidal exchange with Nantucket Sound.
    - It does not have a big problem but Majors Cove does due to part of its structure.
    - The nitrogen has led to the growth on the eelgrass in Trapps Pond. The impaired water and habitat quality is due to its restricted tidal exchange.
    - The main lagoon is good and you have good flushing and also due to its proximity to the tidal inlets but in the other coves not so much.
    - Summary; water quality within the system is heterogeneous high quality throughout the main basin. Lower quality water; tributary basins MEP TN Threshold exceed SKT9 in 2018 and below SKT4 in 2018.
- Katama Bay.
    - It has good water quality and is in pretty good shape.
    - We did testing before, after and the middle of when it was closed.
    - Water quality in the main basin is uniformly high due to the enhanced tidal exchange with the Atlantic Ocean water entering from the south.
    - Summary; generally high quality waters throughout. No MEP TN Threshold.
- Edgartown Great Pond.
    - It is only open periodically when breached.
    - Nitrogen levels are bouncing right on. Some are lower.
    - It has come to the point where it is a one way direction in terms of improvement. Eelgrass and water clarity has improved in this system but we need to look again to reassess.
    - Most of the high water quality was found in the more open water portions of the estuary with moderate water quality in two of the main upper tributary basins.
    - It appears that the periodic tidal breaching of the barrier beach to create periodic tidal exchange is sustaining high moderate water quality throughout the Edgartown Great Pond.

    - Summary; water quality looks good. System shows modest nutrient related improvements and is improving and maintaining some high quality estuarine habitat. MEP TN Threshold just below 2017 and 2018.
- Chilmark Pond.
    - The shoreline is highly dramatic and has a dramatic effect on the pond.
    - It does not have a fixed tidal inlet to support regular tidal exchange. It is periodically breached and remains open for variable periods of time.
    - Only the upper pond and the very lower pond has had chlorophyll.
    - Some years you get really good openings and some years really bad openings which affect the pond.
    - The nitrogen levels were way up and then they come down.
    - Total nitrogen levels do appear to have declined and that is possibly due to improved openings two years in a row.
    - Nutrient water quality appears to depend heavily on the frequency and duration of periodic openings as seen in the last three years of monitoring.
    - As with other closed salt water ponds on Martha's Vineyard it would be useful to compare the difference in the timing and duration of openings undertaken in each year (2016, 2017, 2018) to ascertain the degree to which that may be driving the lower total nitrogen levels observed in 2018.
    - The pond is impaired and it is a poorly flushed system and does not open readily. However, it is likely that continued efforts to improve the quality of openings can result in a refined and focused opening protocol and lessen the need for watershed nitrogen management if successful.
    - Summary; it has a problem and is impaired.
- Tisbury Great Pond.
    - Only two years of data have been collected.
    - This system operates more like a large freshwater pond where mixing is through wind and not tidal currents.
    - It is a closed pond and a wind driven pond.
    - The chlorophylls are quite high. It has a problem.
    - There is not much difference between the stations
    - There is no permanent inlet so there is nothing to drive better water quality.
    - Summary; nutrient related water quality throughout the pond is impaired based on its moderate to poor summertime water quality. MEP TH Threshold exceeded 2017 and 2018.
- Menemsha Pond and Squibnocket Pond.
    - It had a monster dredge program after the summer of 2017 and the channel came out into the main basin which allowed better flushing.
    - Squibnocket Pond is not horrible, it is acceptable, it is moderately impaired. There is no sign of improvement by just chlorophyll. There is no eelgrass and no history there ever was. We are trying to restore the benthic population.
    - It indicates that the dredging had an effect to improve and we will know in a year. A review of the dredging results on tidal exchange should be undertaken to both guide future efforts in Menemsha and other coastal ponds on Marth's Vineyard.
    - Squibnocket is a tough system there is significant improvement to benthic animal habitat and dissolved oxygen levels.
    - Based upon the large dredging project in Menemsha Channel and the improvement in nutrient related water quality in 2018, continued monitoring of nutrient related water

quality in this estuary is important in order to determine if the TMDL threshold compliance for Menemsha Pond has been reached and if not how much less nitrogen management may now be needed to achieve the threshold compared to the prior MEP assessment.

- Summary; Menemsha Pond overall water quality looks good. System shows low to modest nutrient related improvements and is maintaining some high quality estuarine habitat in the lower basin. MEP TN Threshold stations must be sampled. Significant improvement in 2018. Squibnocket Pond is still not able to make it back without something to help it since it is held back. Nutrient related water quality throughout is impaired based on its moderate to poor summertime water quality. MEP TN Threshold exceeded in 2017 and 2018 based on two out of the four threshold stations and other stations must be sampled.

- James Pond.
  - It is not in good shape, it has high chlorophyll and nitrogen levels.
  - It is a landlocked, closed pond with almost no exchange.
  - There is limited information available as a point of comparison for the water quality monitoring data collected during the summer of 2018 and 2017 field season.
  - It is important to continue monitoring nutrient related water quality in this estuary to verify the initial results and to build a sufficient baseline should higher level analysis be needed.
  - A full assessment would be needed to determine the specific nitrogen threshold needed to restore this salt pond and whether lowering nitrogen inputs or increasing tidal flush (and by how much) is feasible for restoration.
  - Summary; system supported generally moderate to low quality waters throughout. No MEP TN Threshold.
- Cape Pogue and Pocha Pond.
  - It is in great shape due to its physical structure and tidal exchange.
  - Pocha Pond has a longer flushing time than Cape Pogue due to its long narrow basin.
  - It is really not impaired and is one of the few systems not impaired on the Island.
  - Summary; overall water quality is currently relatively high. No MEP Threshold.
- Major Findings.
  - Showed higher chlorophyll due to inter-annual differences in light and temperature although there may be a slight trend toward increased water quality as well.
  - Several systems showed potentially declining total nitrogen levels but multiple years at the TMDL target level are needed to prove compliance.
  - Systems with three years of data are to be evaluated as to the level of monitoring needed in 2019.
  - Enhanced tidal exchange via dredging or through prolonged opening of salt ponds (Edgartown and Chilmark) is directly linked to improved water quality in 2018.
  - The dredging to the long channel into Menemsha appears to have significantly improved water quality in both Menemsha and Squibnocket Ponds although Squibnocket Pond is still well above the total nitrogen threshold. Tracking this improvement over coming seasons will determine the true level of water quality improvement.
  - Total nitrogen levels in the Edgartown Great Pond in 2017 and 2018 met the TMDL target levels due most likely due to the improved openings, flushing out the historic WWTF plume and a return to "typical" rainfall conditions.
- Recommendations.

- Continue water quality monitoring for TMDL compliance and to allow for inter-annual variation.
- Due to the critical importance of dissolved oxygens to ecological health of an estuarine basin specific locations will need additional data in the coming years to support more quantitative analysis for restoration. The few stations selected should collect high frequency data using automated sensors.
- Need to track pond opening efforts as possible and collect a few targeted samples to capture "opening success". This will allow a data based evolution of opening protocols to maximize positive impacts on ponds.
- Collect samples from all stations that are used to determine if threshold concentration has been attained.
- Integrate the remaining estuaries into the Martha's Vineyard Island Wide Water Quality Monitoring Program. James Pond, Tisbury Great Pond, Menemsha Pond and Squibnocket Pond need year three data. It is still being decided on the data needed for Oyster Pond.
- Begin planning for targeted data collection on benthic habitat and complete a review of eelgrass distributions.

1.3 Commissioners' Discussion

There was a discussion about build out.

- **Adam Turner** said you talked about the tipping point and especially with build out what is the need with regards to the MEP.
- **Brian Howes** said if you add 20% - 30 % more homes to the load it will go up the same percentage since you are at the tipping point. Building is still going on and you have to take a 10 to 20 year view. The systems are not dead so you have to look at how to maintain and improve.
- **Adam Turner** asked if the build out factored into his calculations.
- **Brian Howes** said all build outs are a fantasy because the regulations could change. But you have to plan for it. If the system is right at the edge you have to maintain.
- **Joan Malkin** asked if it is in the TMDL document.
- **Brian Howes** said it is but the load is independent of current and build out loads.

Doug Sederholm is concerned about the Tisbury Great Pond. It would seem a pond like that if it was properly opened and the delta dredged it could do a lot of good fairly fast. **Brian Howes** said he agrees. We haven't done a lot of dredging and he would need to specifically look at Tisbury Great Pond. There is a lot of sand and there is also here and in Nantucket a lot with deltas. He has not personally looked at the data for where you would need to dredge. It has had some successful openings and we found on Nantucket we had to write a pond opening protocol and with it the first time we did it they had a successful opening.

Doug Sederholm asked what else can be done for the Tisbury Great Pond as it has by far the largest watershed on the Island and has the potential for buildout. **Brian Howes** said the problem is managing your land use. He lives in a town where you have to change the existing load by 50% let alone the buildout. So you still have some room to maneuver.

Joan Malkin said you know our Nitrogen Policy that we based in 2018. None of that data would change the TMDL data. You wouldn't be changing the impairment rating of any of our ponds that are in that policy based on what you have here. **Brian Howes** said to change that rating of the ponds you would need multiple years more water quality data and then you have to do the eelgrass and benthic surveys.

Linda Sibley said when she was little she saw them open the Tisbury Great pond and asked why. **Brian Howes** said historically they have opened ponds for herring and salinity for shellfish. Think about 100

years ago what the population of Martha's Vineyard was and the land use. It was nothing so they were not worried about these things but worried about how to live and probably did it for the herring.

Doug Sederholm said with the new MVC nitrogen policy we are requiring Menemsha Pond to have a 47% nitrogen load reduction and it does not sound right with what you are saying. Did we make a mistake there? **Brian Howes** said he would have to look at the data.

James Joyce said is it crazy to think about anything mechanical to help such as aeration. **Brian Howes** said we do aeration but the problem is if it doesn't work the next year the pond is a disaster and it is difficult in salt water to get enough power to do it effectively. Usually it is not a good fit for salt water systems. It does work in fresh water ponds.

Adam Turner said we have been doing our extensive monitoring for three years. Next year we will scale back slightly and do one in July and one in August and target specific ponds that we want to know more about. We will continue to look at our protocols, data and trends and where we are. We have been the major player in strategic pond openings and not using pond openings for navigation and to do it strategically. We are also doing our PRB and that is going to be good around institutional use such as a sewerage plant. We are also working with Island Elderly Housing to reduce nitrogen with alternative systems. We have a grant. There are ten units on a regular septic tank and we want to put in five and take them all off a septic tank and put in a nitrogen reduction system. If we can't sewer there are options.

Robert Doyle said why are you reducing the amount of testing. **Adam Tuner** said due to funding. We have built up the data base and we will look at them on a rotating basis and be more strategic at looking at them. We are not retreating.

Linda Sibley said is the program flexible enough if we get a surprised reading. **Adam Turner** said it is and we will be more responsive to where pond openings are.

Trip Barnes said has anyone looked at the drinking water in conjunction with this. **Brian Howes** said we have not but we have with engineers in certain applications.

2. UPDATE ON PERMANENT TRAFFIC COUNTERS AND ISLAND WIDE TRAFFIC ENGINEER

Commissioners Present: T. Barnes, L. Brathwaite, C. Brown, R. Doyle, F. Hancock, J. Joyce, J. Malkin, B. Robinson, D. Sederholm, L. Sibley, E. Thomas, R. Toole.

2.1 Traffic Counters Presentation

Dan Doyle presented the following.

- We received TIP funding to install permanent traffic counters.
- We are at the point to get the MassDOT blessing and put out bids and the target is to install for June and the peak season.
- The real uncertainties are April and May as there are other shoulder seasons extending other than September and October.
- We went to three town boards for the Beach Road location as well as the Conservation Commission. The base flood elevation is 13 feet so during storms we will remove the equipment.
- The counters can wirelessly transmit the data.
- We have worked with MassDOT to get them to understand that year round is not the whole picture and we need to look at the seasonal traffic.

Leon Brathwaite said we picked locations for the counters to measure traffic in critical spots.

Adam Turner said we have six counters but we also want to put one in Chilmark.

Doug Sederholm said you did not put one at the triangle in Edgartown because you already know that information. **Adam Tuner** said we can study specific areas during peak season.

Dan Doyle said we tried to find the sweet spots and we can get some of the other sites with the tube counters.

Linda Sibley said she has brought this up before that there should be one at Old County Road in West Tisbury especially due to the year round traffic that uses that access to go up island. **Dan Doyle** said we shifted the State Road location north due to your input.

Leon Brathwaite asked Dan Doyle to explain about the noise and how the system works. **Dan Doyle** said with the exception of Beach Road there will be weights in the road and they will be connected to the utility pole. It will be a post system. This technology will be a pulse that registers in the device. They are about six feet tall and he showed a visual of them.

Adam Turner said we have been good partners with DOT and we have to go to the towns and make presentations.

There was a discussion about the traffic counters.

- **Doug Sederholm** said it would be great to have 50 of these.
- **Dan Doyle** said the cost is $15,000 to $18,000 each and it includes maintenance for two years.
- **Doug Sederholm** asked if they were insurable.
- **Linda Sibley** said it was mentioned that they are warrantied for two years with maintenance and we have to concern ourselves with vandalism. Perhaps Doug Sederholm noting insurance should be considered.
- **Bill Veno** said we are trying to get continuous counts at key locations and this is to get our foot in the water to see if it should be expanded.
- **Joan Malkin** asked if they will give us wait time information.
- **Dan Doyle** said they will give us speed.

2.2 Island Wide Traffic Engineer Presentation

Dan Doyle presented the following.

- We received $100,000 through the Community Compact Program and the money went a really long way.
- A lot of the towns are in a predicament that they are eligible for funding projects and many are TIP (Transportation Improvement Program) projects but we didn't have the design capacity to get them to the stage to submit.
- We have an engineer that is a prequalified contractor with MassDOT from a consulting firm but the engineer that was assigned to us went to the National Guard for ten months and the project manager became ill but we are moving the projects along.
- Some of the projects are stop signs near Menemsha by Labor Day and West Tisbury had a lot of smaller projects and we have been able to be flexible with this resource. The Cromwell Lane Pedestrian Improvements is going out to bid and then we have some complete street money to get projects done. Some people just wanted a technical memo such as resolving the North Tisbury Bridge bicycle span which isn't realistic. For the Edgartown Vineyard Haven Road they want to reimagine the entire 66 foot right of way.

Joan Malkin said if you have the opportunity it might be helpful to get some traffic counts in and out of Menemsha.

Adam Turner said most towns are so small they don't have a traffic engineer. We thought we could leverage some money and get some design work done to leverage additional money. We worked really hard to get the money and we don't want this engineer to use all the funds reaching out for surveys.

James Joyce said he believes at some point the Island will benefit with another round about at Barnes Road and West Tisbury Road and how do we get that on the docket. **Leon Brathwaite** said another exit from the airport would help that also.

Adam Turner said both of these traffic projects have increased our capacity tremendously. It allows us to use the capacity we have to look at what we really need to look at.

3. NEW BUSINESS

Commissioners Present: T. Barnes, L. Brathwaite, C. Brown, R. Doyle, F. Hancock, J. Joyce, J. Malkin, B. Robinson, D. Sederholm, L. Sibley, E. Thomas, R. Toole.

Adam Turner said the next MVC meeting will be on April 4, 2019.

Trip Barnes asked what is up with the underwater cable. **Adam Turner** said the public record closed today (March 28, 2019) and then it goes to LUPC and we need to organize all the data and perhaps it will be at LUPC in two weeks. He suggested that the Commissioners look at the record. There is a lot of information and exhibits have been put in.

Linda Sibley said she would like to offer an award to Dan Doyle for decoding TIP during his presentation and saying what it is for the public.

Christina Brown asked if there will be a bibliography for the cable information since there is so much. **Adam Turner** said it will be organized.

The meeting was adjourned at 8:45 p.m.

DOCUMENTS REFERRED TO DURING THE MEETING

- Water Quality Monitoring and Assessment of the Martha's Vineyard Island-Wide Estuaries and Salt Ponds Summary 2018 (year 3 of 3)

Chairman — Date 8/1/19

Clerk-Treasurer — Date 8 AUG 2019